

**IN THE CLAIMS:**

Please amend the claims as follows:

1-30. (Cancelled)

31. (New) A method for making a junction, comprising the steps of:

irradiating a plasma containing He or a plasma containing Ar to a substrate;

introducing impurities into the substrate; and

irradiating an electromagnetic wave so as to electrically activate the impurities.

32. (New) A method for making a junction, comprising the steps of:

irradiating either a plasma containing He or a plasma containing Ar and a plasma containing particles to be served as impurities to a substrate, so as to introduce the impurities into the substrate; and

irradiating an electromagnetic wave so as to electrically activate the impurities.

33. (New) The method for making a junction according to claim 31 or 32, wherein the plasma is primarily comprised of He.

34. (New) The method for making a junction according to claim 31 or 32, wherein the plasma is comprised of only He.

35. (New) The method for making a junction according to claim 31 or 32, wherein in the step of irradiating the plasma, an amorphous layer is formed by He-plasma.

36. (New) The method for making a junction according to claim 31 or 32, wherein, assuming that wavelength is  $\lambda(\text{nm})$  and light absorption ratio is  $A(\%)$ , the light absorption rate of a layer which is formed by introducing the impurities into the substrate satisfies at least one of following conditions:

at the wavelength ranging from 375 nm (inclusive) to 500 nm,  $A > 7E32\lambda^{-12.316}$ ;

at the wavelength ranging from 500 nm (inclusive) to 600 nm,  $A > 2E19\lambda^{-7.278}$ ;

at the wavelength ranging from 600 nm (inclusive) to 700 nm,  $A > 4E14\lambda^{-5.5849}$ ; and

at the wavelength ranging from 700 nm (inclusive) to 800 nm,  $A > 2E12\lambda^{-4.773}$ .

37. (New) The method for making a junction according to claim 31 or 32, wherein, assuming that wavelength is  $\lambda(\text{nm})$  and absorption coefficient is  $\alpha(\text{cm}^{-1})$ , the light absorption coefficient of a layer which is formed by introducing the impurities into the substrate satisfies at least one of following conditions:

at the wavelength ranging from 375 nm (inclusive) to 500 nm,  $\alpha > 1E38\lambda^{-12.505}$ ;

at the wavelength ranging from 500 nm (inclusive) to 600 nm,  $\alpha > 1E24\lambda^{-7.2684}$ ;

at the wavelength ranging from 600 nm (inclusive) to 700 nm,  $\alpha > 2E19\lambda^{-5.5873}$ ; and

at the wavelength ranging from 700 nm (inclusive) to 800 nm,  $\alpha > 1E17\lambda^{-4.7782}$ .

38. (New) The method for making a junction according to claim 31 or 32, wherein:

the substrate is a silicon substrate; and

the impurities is a boron to be supplied to a surface of the Silicon substrate.

39. (New) The method for making a junction according to claim 31 or 32, wherein the step of irradiating the electromagnetic wave is a step of irradiating light having an intensity peak at wavelength longer than 375 nm (inclusive).

40. (New) The method for making a junction according to claim 39, wherein the step of irradiating the electromagnetic wave is a step of irradiating light having an intensity peak at wavelength longer than 375 nm (inclusive) and shorter than 800 nm (inclusive).

41. (New) The method for making a junction according to claim 40, wherein the light having the intensity peak at the wavelength longer than 375 nm (inclusive) and shorter than 800 nm (inclusive) is a xenon flash lamp light.

42. (New) The method for making a junction according to claim 38, wherein the silicon substrate is a substrate having a (100) plane or the silicon substrate comprises a plane inclined from the (100) plane by several degrees.

43. (New) The method for making a junction according to claim 38, wherein, assuming that wavelength is  $\lambda(\text{nm})$  and absorption ratio is  $A(\%)$ , the light absorption ratio of a layer into which the boron is introduced for light having a wavelengths longer than 375 nm (inclusive) and shorter than 800 nm (inclusive) satisfies  $A > 1E19\lambda^{-6.833}$ .

44. (New) The method for making a junction according to claim 38, wherein, assuming that wavelength is  $\lambda(\text{nm})$  and absorption coefficient is  $\alpha(\text{cm}^{-1})$ , the light absorption coefficient of a layer into which the boron is introduced to light having wavelengths longer than 375 nm (inclusive) and shorter than 800 nm (inclusive) satisfies  $\alpha > 1E19\lambda^{-7.1693}$ .

45. (New) The method for making a junction according to claim 31 or 32, wherein the step of introducing the impurities is a step of introducing the impurities by plasma doping.

46. (New) The method for making a junction according to claim 31 or 32, wherein the substrate is a SOI substrate with a Silicon thin film formed on a surface thereof.

47. (New) The method for making a junction according to claim 31 or 32, wherein the substrate is a strained Si substrate with a Si film formed on a surface thereof.

48. (New) The method for making a junction according to claim 31 or 32, wherein the substrate is a glass substrate with a poly-Si thin film formed on a surface thereof.

49. (New) A processed material formed by the method for making a junction according to claim 31 or 32.